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ABSTRACT

A study was conducted to investigate selected reading instruction process variables employed by third and sixth grade teachers and their effect on pupils' reading achievement, to explore the difference between third and sixth grade teachers' reading instruction process variables, and to investigate the relationship between selected pupil variables and pupils' reading achievement. A sample of 27 third grade teachers and 31 sixth grade teachers were assigned to one of five success status categories based on the pattern of mean reading achievement levels recorded for their actual 1974, 1976, and 1978 classes. The teachers were administered the Survey of Teacher Emphases and Practices in Reading Instruction in 1978. Differences were noted between third and sixth grade instruction in the use of skill books and teacher-made games and individual instruction. Interim findings for 1974 and 1976 indicated a linear pattern of continued emphases: effective teachers of reading reported signficantly different instruction and diagnosis emphases and noted significantly different pupil engaged time in reading instruction than did less effective teachers. However, the 1978 data for this pattern was reversed. Teachers identified as effective for the six-year period reported less emphasis for these components than did the less effective teachers. (MKM)

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Longitudinal Investigation of the Effects of Teachers' Reading Instructional Emphasis and Pupil Engaged Time In Reading Instruction on Pupils' Reading Achievement*

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The role of the classroom teacher generally is recognized as a major variable related to pupils' level of reading achievement. However, research investigations that attempt to identify generic teacher instructional variables that explain pupils' reading achievement have not been particularly productive (Farr and Weintraub, 1975; McNeil and Popam, 1973; Rosenshine, 1977). Although a lack of supporting evidence exists by which to recommend the use of a considerable number of reading instruction practices, the role of the teacher has been established as one of the major variables that determines the effectiveness of reading instruction (Artley, 1975; Bond and Dykstra, 1967; Gates, 1937; McDonald, 1976; Medley, 1977). The perceived importance of the role of the teacher

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in relation to pupils' reading achievement, therefore, has not diminished.

Process-product research that deals with teacher instruction as it relates directly to pupil reading outcomes is receiving increased researcher's attention. For example, researchers have explored emphases given to various areas of classroom reading (Barr, 1974-75; Rupley, 1977a, 1977b), effort exerted by the reading teacher (Blair, 1977; Frizzi, 1972), and use of reading diagnosis-prescription (Fox and Emans, 1973; Weber, 1971). In addition, research on pupil variables, such as time spent on a learning task (Bloom, 1976; Coker, Lorentz and Coker, 1976) and involvement in direct sequential instruction (McDonald, 1975; Soar, 1973; Solomon and Kendall, 1976) hold promise for identifying what is an effective reading teacher.

The purposes of the present study were to (1) continue to investigate selected reading instruction process variables employed by third and sixth grade teachers and their effect on pupils' reading achievement (Rupley, 1977a); (2) explore the differences between third grade teachers' reading instruction process variables and sixth grade teachers' reading instruction process variables; and (3) investigate the relationship between selected pupil variables--time spent on reading tasks, materials engaged in for instruction and time spent in the reading materials--and pupils' reading achievement.

Method

Sample

The study involved a sample of 27 third grade teachers and 31 sixth grade teachers teaching reading in self-contained classrooms in the Fort Wayne Community School System, Fort Wayne, Indiana. All of the teachers used a basal approach as their primary method of reading instruction.

Procedure

Teachers in the sample were assigned to one of five success status categories based on the pattern of mean reading achievement levels recorded for their actual 1974, 1976, 1978 classes. The five success categories were low (L), moderately low (ML), average (A), moderately high (MH), and high (H).

Success status was based on each teacher's classroom mean reading achievement in relation to predicted mean reading achievement for each of the years of interest. Least squares regression (Glass and Stanley, 1970) was used to determine predicted levels of mean reading achievement for both third and sixth grade teachers for each year of data collection, 1974, 1976, and 1978. All third grade and sixth grade classrooms, for each year, were used to generate six prediction lines. Each prediction line was based on class mean IQ scores (Otis Lennon Mental Ability Test, Form J, administered in the fall of 1973, 1975, and 1977) and class mean total reading achievement scores (SRA Achievement Test, administered in the spring of 1974, 1976, and 1978). Individual classes for the teachers in the sample were

plotted in relation to the appropriate prediction line. A teacher whose class mean reading achievement fell greater than one-half a standard error of estimate above the prediction line was deemed high effective, a teacher whose class mean reading achievement fell within plus or minus one-half a standard error of estimate of the prediction line was deemed average effective, and a teacher whose class reading achievement mean fell greater than one-half a standard error of estimate below the prediction line was deemed less effective. Mean class reading achievement for all teachers in the sample was plotted in relation to the appropriate grade level and year prediction line.

Success status classification for third grade teacher (N=27) resulted in five Ls, five MLs, eight As, four MHs, and five Hs. Success status classification for sixth grade teacher (N=31) was eight MLs, fourteen As, three MHs, and six Hs.

Data Collection

The 1978 sample of teachers was administered the 1978 edition of the Survey of Teacher Emphases and Practices in Reading Instruction (STEPRI) (Rupley, 1975), which is designed to measure (1) the amount of instructional emphases given to eight components of a developmental reading program over a six week period, and (2) the use of selected reading instruction practices in the teaching of developmental reading.

The STEPRI instructional emphases components were (1) ongoing diagnosis, (2) specific diagnosis, (3) comprehension readiness, (4) comprehension following reading, (5) comprehension above the literal

level, (6) oral reading, (7) structured reading activities, and (8) reading application. The eight components were derived using information based on the emphases components portion of the STEPRI. Teachers responded to each item by selecting one of five options that indicated the degree of emphasis given to a statement. Cronbach's alpha for this part of the STEPRI was 0.88, and reliability coefficients for the eight components ranged from 0.42 to 0.68.

The reading instruction practices part of the STEPRI were: (1) grouping schemes, (2) sequence of instruction, (3) diagnosis of reading, (4) basal activities, (5) time that pupils were engaged daily in reading activities, (6) time that pupils were engaged daily in various reading materials, and (7) classroom attendance index. Teachers responded by either writing an explanation, selecting an appropriate description, or specifying the approximate frequency of use for each of the seven areas of interest.

Analysis

Analysis of variance procedures were used to detect differences across the success status categories (L, ML, A, MH, H) for the following STEPRI information: (1) mean values reported by teachers for the eight components of emphases; (2) mean percentages of time that pupils were engaged daily in various reading materials; and (3) mean percentages of time that pupils were engaged daily in direct group instruction, individual instruction, seat work, recreational reading, and independent reading activities.

An alpha level of 0.15 was established apriori to data analysis.

Although this alpha level deviates from those typically cited in educational and psychological research, i.e., 0.05 or 0.01, precedence for this decision can be found in the literature (Hays, 1973; Rupley, 1977a, 1977b, 1977c). An additional rationale for the use of a non-traditional significance region is that a major purpose of this long-term investigation is to identify credible instructional variables that warrant rigorous examination in natural classroom settings.

Results

Analysis of variance on the mean values reported by teachers for the eight components of emphases on the STEPRI revealed a F-ratio significant at the $p < 0.07$ level, $F(4, 27) = 2.53$ for specific diagnosis for third grade. For sixth grade, a F-ratio significant at the $p < 0.08$ level, $F(3, 27)=2.49$ was detected for ongoing diagnosis. F-ratio values for the other seven emphases components were not significant at the $p < 0.15$ level for either grade.

Analysis of variance of mean percentage of time that pupils were engaged in various reading materials revealed no significant differences for either grade across the success status categories. Between grade levels, the largest differences were noted for skill books, grade three teachers reported six percent and grade six teachers reported seventeen percent pupil engaged time; and teacher-made games, grade three teachers reported eleven percent and grade six teachers reported three percent pupil engaged time.

Finally, analysis of variance test of mean percentage of time that pupils were engaged daily in various reading instruction tasks

at third grade revealed significant Fs for independent reading at the $p < 0.05$ level, $F(3, 27)=4.02$, and for individual instruction at the $p < 0.11$ level, $(F3, 27)=2.15$. A significant difference at sixth grade was detected for individual instruction, $p < 0.05$, $F(4, 22)=3.75$. F ratio values were not significant at the $p < 0.15$ level for percentage of time that pupils were engaged daily in direct instruction, seat work, or recreational reading at either grade level.

Implications and Future Directions

The intent of our present study was to link interim findings (Rupley, 1975, 1977a, 1977b) to the major hypotheses of this long term inquiry; namely, effective teachers of reading (MH, H) report significantly different instructional emphases than do less effective teachers of reading (L, MA, A); and effective teachers of reading (MH, H) report significantly different pupil engaged time in reading instruction than do less effective teachers of reading (L, MA, A). Interim findings for 1974 and 1976 indicated a linear pattern of emphases, favoring the effective teacher for the emphases components of ongoing diagnosis, comprehension following reading, structured reading activities, and reading application. Teachers identified as effective for the four year period reported greater emphases given to these components than did less effective teachers. The present investigation revealed, also, a linear pattern for the emphases components ongoing diagnosis and specific diagnosis. However, for the 1978 data this pattern was reversed. Teachers identified as effective for the six year period reported less emphases for these

components than did the less effective teachers.

The importance of instructional emphases appears to be a credible variable related to pupils' level of reading achievement. The use of both ongoing diagnosis and specific diagnosis significantly favored the effective teacher for data obtained in 1974 and 1976. However, based on 1978 findings, the relationship of instruction emphases to pupil reading outcomes needs to be reevaluated. The present study suggests that further explanation of how both specific and ongoing diagnosis is conducted and how the diagnostic results are used in instruction is warranted.

No linear patterns were noted for the time that pupils were engaged daily in various reading instruction tasks and their level of reading achievement. Third grade means for engaged time were highest for H and A teachers and lowest for MH and L teachers. The mean engaged time at sixth grade for individual teacher instruction was highest for A teacher, lowest for MA teachers, and similar (.01 differences) for ML and H teachers. Engaged time patterns at sixth grade for independent reading revealed the highest mean for MH teachers and the lowest mean for H teachers.

The fact that no linear patterns for pupil time engaged daily in reading instruction were noted, suggests that not only should F testing be employed in future investigation, but better models and strategies need to be developed, also. Future research should consider the possibility that relationships between learning outcomes and time engaged in reading instruction are more likely to assume

nonlinear rather than strict linear functional forms.

The concerns mentioned above should be addressed in future research on teacher effectiveness in reading instruction. Future research should focus on (1) instructional process variables that teachers employ in their reading instruction and (2) actual time that students are engaged in reading instruction, rather than gross measures of time allocated. This task would require more precise data gathering in the naturalistic setting of reading classrooms over an extended period of time.

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